

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

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| Applicant's or agent's file reference 2004-PCT01 | FOR FURTHER ACTION | See item 4 below |
| International application No. PCT/JP2004/019723 | International filing date (<i>day/month/year</i>) 22 December 2004 (22.12.2004) | Priority date (<i>day/month/year</i>) 28 December 2003 (28.12.2003) |
| International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 | | |
| Applicant ARAI MEDICAL INSTRUMENTS, INC. | | |

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|-------------------------------------|--|---|-----------|---------------------|--------------------------|------------|----------|--------------------------|-------------|--|--------------------------|------------|----------------------------|-------------------------------------|-----------|---|--------------------------|------------|-------------------------|--------------------------|-------------|--|--------------------------|--------------|---|
| 1. | This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> .1(a). | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | <p>This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. | <p>This report contains indications relating to the following items:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> | <input checked="" type="checkbox"/> | Box No. I | Basis of the report | <input type="checkbox"/> | Box No. II | Priority | <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | <input type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input type="checkbox"/> | Box No. VII | Certain defects in the international application | <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. II | Priority | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VI | Certain documents cited | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | The International Bureau will communicate this report to designated Offices in accordance with Rules 44 <i>bis</i> .3(c) and 93 <i>bis</i> .1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44 <i>bis</i> .2). | | | | | | | | | | | | | | | | | | | | | | | | |

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|---|---|--|---|
| <p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Date of issuance of this report 22 August 2006 (22.08.2006)</td> </tr> <tr> <td style="padding: 2px;"> <div style="display: flex; justify-content: space-between;"> <div>Authorized officer</div> <div>Yoshiko Kuwahara</div> </div> <div style="margin-top: 5px;">e-mail: pt07@wipo.int</div> </td> </tr> </table> | Date of issuance of this report 22 August 2006 (22.08.2006) | <div style="display: flex; justify-content: space-between;"> <div>Authorized officer</div> <div>Yoshiko Kuwahara</div> </div> <div style="margin-top: 5px;">e-mail: pt07@wipo.int</div> |
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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

TRANSLATION
PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

2004-PCT01

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2004/019723

International filing date (day/month/year)

22.12.2004

Priority date (day/month/year)

28.12.2003

International Patent Classification (IPC) or both national classification and IPC

Applicant

ARAI MEDICAL INSTRUMENTS, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/019723

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2004/019723

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

| | | | |
|-------------------------------|--------|--------------|-----|
| 1. Statement | | | |
| Novelty (N) | Claims | 5, 9 | YES |
| | Claims | 1-4, 6, 7, 8 | NO |
| Inventive step (IS) | Claims | | YES |
| | Claims | 1-9 | NO |
| Industrial applicability (IA) | Claims | 1-9 | YES |
| | Claims | | NO |

| | | | |
|--|--|--|--|
| 2. Citations and explanations: | | | |
| Document 1: JP 63-80402 A (Koito Manufacturing Co., Ltd.), 11 April 1988, page 2, lower right column, lines 3 to 16; Figs. 1 to 4 | | | |
| Document 2: JP 10-39175 A (Sanyo Electric Co., Ltd.), 13 February 1998, page 2, column 2, lines 36 to 42; Fig. 1 | | | |
| Document 3: JP 2003-101077 A (Pentax Kabushiki Kaisha), 04 April 2003, page 3, column 4, lines 14 to 22; Fig. 2 | | | |
| Document 4: JP 2003-186427 A (Yazaki Corp.), 04 July 2003, page 3, column 4, line 45 to page 4, column 5, line 4; Figs. 1, 2 | | | |
| Document 5: JPIP 08-106260 A (Hitachi Media Electronics Co., Ltd.), 23 April 1996, page 4, column 6; lines 1 to 6; Figs. 15, 16 | | | |
| Claim 1 | | | |
| The invention of claim 1 does not appear to possess novelty or to involve an inventive step based on document 1 or 5 cited in the ISR. | | | |
| Document 1 describes an optical diffusing element comprising a lens and a reflecting surface formed by coating a white coating. As described by the applicant in page 7, lines 2-4 of the description, the feature of a reflecting surface formed by a white coating being a reflecting/diffusing surface is within the well-known knowledge of a person skilled in the art. | | | |
| The diffusing/reflecting surface and the lens described in document 1, of course, are items for controlling output light of a LED. Therefore, it is undeniably obvious that such optical elements afford illumination distribution control, keeping such distribution uniform to a certain extent. | | | |
| Document 5 describes an optical diffusing element having a light-transmission section and a diffusing section. | | | |

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/019723

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

Claims 2-4, 6 and 8

The invention of claims 2-4, 6 and 8 do not appear to possess novelty or to involve an inventive step based on document 1 cited in the ISR, for the same reasons stated regarding claim 1.

Claims 5 and 9

The invention of claims 5 and 9 do not appear to involve an inventive step based on documents 2, 3 or 4 cited in the ISR.

In addition to the subject matter illustrated for claim 1, document 1 describes providing a reflecting / diffusing surface on the inner surface of a rectangular parallelepiped (Fig. 2, compartment 22).

Also, forming a reflecting surface in the shape of a tubular inner surface is merely a design variant for embodying this technology, and thus an arbitrary design choice made by a person skilled in the art in accordance with the used embodiment, as described for instance in documents 2-4.

Therefore, no particular difficulty can be discerned in shaping as a tubular inner surface the diffusing /reflecting surface described in document 1.

Claim 7

The invention of claim 7 does not appear to possess novelty or to involve an inventive step based on document 5 cited in the ISR. Document 5 describes an optical diffusing element provided with a diffusing section that comprises a translucent scattering member.